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LUND, JEFFRIE ROBERT

ART UNIT	PAPER NUMBER
1763	

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/709,622	NOGAMI, HIROSHI	
	Examiner	Art Unit	
	Jeffrie R. Lund	1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 May 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 10/043,190.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1 and 3-10 are rejected under 35 U.S.C. 103(a) as being obvious over Xu et al, US Patent Application publication 2001/0042512 A1 in view of Kasai et al, US Patent 6,436,193 B1, Long et al, US Patent Application Publication 2003/0079983 A1, and Long et al, US Patent 6,296,711 B1.

Xu et al teaches: a vacuum vessel 12 separated into two chambers, the first one 15 of the two chambers containing a radio-frequency electrode 20; and the second one 16 of the two chambers containing a substrate support mechanism 17 for mounting a substrate 11 wherein said vacuum vessel is separated by an electrically conductive partitioning section 14. The partitioning section includes: a plurality of through-holes 25 to allow communication between the first chamber and second chamber; an interior space 24 for receiving a reactive gas, the interior space separated from the first chamber and communicating with the second chamber through a plurality of diffusion holes 26; and is mounted to the wall by a fixing part 22 extending into the vacuum vessel. (Entire document)

Xu et al differs from the present invention in that Xu et al does not teach a heater for heating the electrically conducting partition to a specific temperature, or a high

temperature electrically conductive spiral shield to achieve electrical contact between the partitioning section and the vacuum vessel.

Kasai et al teaches that showerheads (i.e. conductive partition) can be heated (column 10 lines 12-18).

Long et al teaches "a spiral shield comprises an inner rubber seal encircled by a spiral conductor and is a commonly used method to seal areas of the chamber and maintain a good electrical contact". (Paragraph 90 and Figure 18a)

Loan et al teaches a gas supply system (Figure 1A, 1B, column 6 line 45 through column 9 line 24) that includes a vaporizer and a gas supply pipe heated to a temperature approximate the vaporizer (i.e. 200°C or more) (column 8 lines 40-51, column 40 lines 20-25). Loan et al specifically teaches that the elements exposed to high temperatures must be able to withstand the high temperatures including all seals, and that high temperature seals can be made from CHEMRAZ E38, KALNEZ 8101, SAHARA, or DRY seals. (Column 10 line 66 through column 11 line 51)

The motivation for adding a heater to the conductive partition of Xu et al as taught by Kasai et al is to control the temperature of the processing gas to prevent condensation of the processing gas, or heat the processing gas to the desired temperature prior to the gas entering the processing vessel.

The motivation for heating the conductive partition to a specific temperature is to control the heater and maintain the desired temperature.

The motivation for using the electrically conductive spiral shield of Long et al to connect the vacuum vessel and conductive partition of Xu et al is to seal and electrically

couple the vacuum vessel and conductive partition as taught by Long et al.

The motivation for replacing the rubber with CHEMRAZ E38, KALNEZ 8101, SAHARA, DRY seal or any other known high temperature sealing material in the spiral shield of Long et al is to enable the spiral shield to be use in high temperature conditions as taught by Loan et al.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a heater to the conductive partition of Xu et al to heat the conductive plate to a desired temperature as taught by Kasai et al, use a conductive spiral shield to electrically couple the conductive partition to the vacuum vessel of Xu et al as taught by Long et al, and make the spiral shield out of a material that will withstand the temperatures to which it will be exposed as taught by Loan et al.

Applicant cannot rely upon the foreign priority papers to overcome this rejection (based on 102(a)) because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Xu et al constitutes prior art under 35 U.S.C. 102(a and e).

3. Claims 1 and 3-10 are rejected under 35 U.S.C. 103(a) as being obvious over Ko, US Patent 6,427,623 B2 in view of Kasai et al, US Patent 6,436,193 B1, Long et al, US Patent Application Publication 2003/0079983 A1, and Loan et al, US Patent 6,296,711 B1.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome

by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Ko teaches: a vacuum vessel 12 separated into two chambers, the first one 15 of the two chambers containing a radio-frequency electrode 20; and the second one 16 of the two chambers containing a substrate support mechanism 17 for mounting a substrate 11 wherein said vacuum vessel is separated by an electrically conductive partitioning section 14. The partitioning section includes: a plurality of through-holes 25 to allow communication between the first chamber and second chamber; an interior space 24 for receiving a reactive gas, the interior space separated from the first chamber and communicating with the second chamber through a plurality of diffusion holes 26; and is mounted to the wall by a fixing part 22 extending into the vacuum

vessel. (Entire document)

Ko differs from the present invention in that Ko does not teach a heater for heating the electrically conducting partition to a specific temperature, or a high temperature electrically conductive spiral shield to achieve electrical contact between the partitioning section and the vacuum vessel.

Kasai et al teaches that showerheads (i.e. conductive partition) can be heated (column 10 lines 12-18).

Long et al teaches "a spiral shield comprises an inner rubber seal encircled by a spiral conductor and is a commonly used method to seal areas of the chamber and maintain a good electrical contact". (Paragraph 90 and Figure 18a)

Loan et al teaches a gas supply system (Figure 1A, 1B, column 6 line 45 through column 9 line 24) that includes a vaporizer and a gas supply pipe heated to a temperature approximate the vaporizer (i.e. 200°C or more) (column 8 lines 40-51, column 40 lines 20-25). Loan et al specifically teaches that the elements exposed to high temperatures must be able to withstand the high temperatures including all seals, and that high temperature seals can be made from CHEMRAZ E38, KALNEZ 8101, SAHARA, or DRY seals. (Column 10 line 66 through column 11 line 51)

The motivation for adding a heater to the conductive partition of Ko as taught by Kasai et al is to control the temperature of the processing gas to prevent condensation of the processing gas or heat the processing gas to the desired temperature prior to the gas entering the processing vessel.

The motivation for heating the conductive partition to a specific temperature is to

control the heater and maintain the desired temperature.

The motivation for using the electrically conductive spiral shield of Long et al to connect the vacuum vessel and conductive partition of Ko is to seal and electrically couple the vacuum vessel and conductive partition as taught by Long et al.

The motivation for replacing the rubber with CHEMRAZ E38, KALNEZ 8101, SAHARA, DRY seal or any other known high temperature sealing material in the spiral shield of Long et al is to enable the spiral shield to be use in high temperature conditions as taught by Loan et al.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a heater to the conductive partition of Ko to heat the conductive plate to a desired temperature as taught by Kasai et al, use a conductive spiral shield and screws to electrically couple the conductive partition to the vacuum vessel of Ko as taught by Long et al, and make the spiral shield out of a material that will withstand the temperatures to which it will be exposed as taught by Loan et al.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

4. Claims 1 and 3-10 are rejected under 35 U.S.C. 103(a) as being obvious over Tanaka et al, US Patent Application Publication 2002/0152960 A1, in view of Kasai et al, US Patent 6,436,193 B1, Long et al, US Patent Application Publication 2003/0079983 A1, and Loan et al, US Patent 6,296,711 B1.

The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Tanaka et al teaches: a vacuum vessel 22 separated into two chambers, the first one 25 of the two chambers containing a radio-frequency electrode 30; and the second one 26 of the two chambers containing a substrate support mechanism 27 for mounting a substrate 21 wherein said vacuum vessel is separated by an electrically conductive partitioning section 24. The partitioning section includes: a plurality of through-holes 8 to allow communication between the first chamber and second chamber; an interior space 6 for receiving a reactive gas, the interior space separated from the first chamber and

communicating with the second chamber through a plurality of diffusion holes 7; and is mounted to the wall by a fixing part 22 extending into the vacuum vessel. (Entire document)

Tanaka et al differs from the present invention in that Tanaka et al does not teach a heater for heating the electrically conducting partition to a specific temperature, or a high temperature electrically conductive spiral shield to achieve electrical contact between the partitioning section and the vacuum vessel.

Kasai et al teaches that showerheads (i.e. conductive partition) can be heated (column 10 lines 12-18).

Long et al teaches "a spiral shield comprises an inner rubber seal encircled by a spiral conductor and is a commonly used method to seal areas of the chamber and maintain a good electrical contact", and attaching parts sealed by a spiral shield with screws. (Paragraph 90 and Figure 18a)

Loan et al teaches a gas supply system (Figure 1A, 1B, column 6 line 45 through column 9 line 24) that includes a vaporizer and a gas supply pipe heated to a temperature approximate the vaporizer (i.e. 200°C or more) (column 8 lines 40-51, column 40 lines 20-25). Loan et al specifically teaches that the elements exposed to high temperatures must be able to withstand the high temperatures including all seals, and that high temperature seals can be made from CHEMRAZ E38, KALNEZ 8101, SAHARA, or DRY seals. (Column 10 line 66 through column 11 line 51)

The motivation for adding a heater to the conductive partition of Tanaka et al as taught by Kasai et al is to control the temperature of the processing gas to prevent

condensation of the processing gas or heat the processing gas to the desired temperature prior to the gas entering the processing vessel.

The motivation for heating the conductive partition to a specific temperature is to control the heater and maintain the desired temperature.

The motivation for using the electrically conductive spiral shield of Long et al to connect the vacuum vessel and conductive partition of Tanaka et al is to seal and electrically couple the vacuum vessel and conductive partition as taught by Long et al.

The motivation for replacing the rubber with CHEMRAZ E38, KALNEZ 8101, SAHARA, DRY seal or any other known high temperature sealing material in the spiral shield of Long et al is to enable the spiral shield to be use in high temperature conditions as taught by Loan et al.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a heater to the conductive partition of Tanaka et al to heat the conductive plate to a desired temperature as taught by Kasai et al, use a conductive spiral shield and screws to electrically couple the conductive partition to the vacuum vessel of Tanaka et al as taught by Long et al, and make the spiral shield out of a material that will withstand the temperatures to which it will be exposed as taught by Loan et al.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

5. Claims 1 and 3-10 are rejected under 35 U.S.C. 103(a) as being obvious over

Yuda et al, US Patent 6,663,715 B1, in view of Kasai et al, US Patent 6,436,193 B1, Long et al, US Patent Application Publication 2003/0079983 A1, and Loan et al, US Patent 6,296,711 B1.

Yuda et al teaches: a vacuum vessel 1 separated into two chambers, the first one 22 of the two chambers containing a radio-frequency electrode 2; and the second one of the two chambers containing a substrate support mechanism 3 for mounting a substrate 4 wherein said vacuum vessel is separated by an electrically conductive partitioning section 5. The partitioning section includes: a plurality of through-holes 13 to allow communication between the first chamber and second chamber; an interior space 7 for receiving a reactive gas, the interior space separated from the first chamber and communicating with the second chamber through a plurality of diffusion holes 16; and is mounted to the wall by a fixing part (not shown) extending into the vacuum vessel. (Entire document)

Yuda et al differs from the present invention in that Yuda et al does not teach a heater for heating the electrically conducting partition to a specific temperature, or a high temperature electrically conductive spiral shield to achieve electrical contact between the partition section and the vacuum vessel.

Kasai et al teaches that showerheads (i.e. conductive partition) can be heated (column 10 lines 12-18).

Long et al teaches “a spiral shield comprises an inner rubber seal encircled by a spiral conductor and is a commonly used method to seal areas of the chamber and maintain a good electrical contact”, and attaching parts sealed by a spiral shield with

screws. (Paragraph 90 and Figure 18a)

Loan et al teaches a gas supply system (Figure 1A, 1B, column 6 line 45 through column 9 line 24) that includes a vaporizer and a gas supply pipe heated to a temperature approximate the vaporizer (i.e. 200°C or more) (column 8 lines 40-51, column 40 lines 20-25). Loan et al specifically teaches that the elements exposed to high temperatures must be able to withstand the high temperatures including all seals, and that high temperature seals can be made from CHEMRAZ E38, KALNEZ 8101, SAHARA, or DRY seals. (Column 10 line 66 through column 11 line 51)

The motivation for adding a heater to the conductive partition of Yuda et al as taught by Kasai et al is to control the temperature of the processing gas to prevent condensation of the processing gas or heat the processing gas to the desired temperature prior to the gas entering the processing vessel.

The motivation for heating the conductive partition to a specific temperature is to control the heater and maintain the desired temperature.

The motivation for using the electrically conductive spiral shield of Long et al to connect the vacuum vessel and conductive partition of Yuda et al is to seal and electrically couple the vacuum vessel and conductive partition as taught by Long et al.

The motivation for replacing the rubber with CHEMRAZ E38, KALNEZ 8101, SAHARA, DRY seal or any other known high temperature sealing material in the spiral shield of Long et al is to enable the spiral shield to be use in high temperature conditions as taught by Loan et al.

Therefore it would have been obvious to one of ordinary skill in the art at the time

the invention was made to add a heater to the conductive partition of Yuda et al to heat the conductive plate to a desired temperature as taught by Kasai et al, use a conductive spiral shield and screws to electrically couple the conductive partition to the vacuum vessel of Yuda et al as taught by Long et al, and make the spiral shield out of a material that will withstand the temperatures to which it will be exposed as taught by Loan et al.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1 and 3-10 are rejected under the judicially created doctrine of

obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,245,396 B1 (Nogami), in view of Kasai et al, US Patent 6,436,193 B1, Long et al, US Patent Application Publication 2003/0079983 A1, and Loan et al, US Patent 6,296,711 B1.

Nogami teaches: a vacuum vessel separated into two chambers, the first one of the two chambers containing a radio-frequency electrode; and the second one of the two chambers containing a substrate support mechanism for mounting a substrate

wherein said vacuum vessel is separated by an electrically conductive partitioning section. The partitioning section includes: a plurality of through-holes to allow communication between the first chamber and second chamber; and an interior space for receiving a reactive gas, the interior space separated from the first chamber and communicating with the second chamber through a plurality of diffusion holes. (Claims 1, 3-6)

Nogami differs from the present invention in that Nogami does not teach a heater for heating the electrically conducting partition to a specific temperature, or a high temperature electrically conductive spiral shield to achieve electrical contact between the partition section and the vacuum vessel.

Kasai et al teaches that showerheads (i.e. conductive partition) can be heated (column 10 lines 12-18).

Long et al teaches "a spiral shield comprises an inner rubber seal encircled by a spiral conductor and is a commonly used method to seal areas of the chamber and maintain a good electrical contact", and attaching parts sealed by a spiral shield with screws. (Paragraph 90 and Figure 18a)

Loan et al teaches a gas supply system (Figure 1A, 1B, column 6 line 45 through column 9 line 24) that includes a vaporizer and a gas supply pipe heated to a temperature approximate the vaporizer (i.e. 200°C or more) (column 8 lines 40-51, column 40 lines 20-25). Loan et al specifically teaches that the elements exposed to high temperatures must be able to withstand the high temperatures including all seals, and that high temperature seals can be made from CHEMRAZ E38, KALNEZ 8101,

SAHARA, or DRY seals. (Column 10 line 66 through column 11 line 51)

The motivation for adding a heater to the conductive partition of Nogami as taught by Kasai et al is to control the temperature of the processing gas to prevent condensation of the processing gas or heat the processing gas to the desired temperature prior to the gas entering the processing vessel.

The motivation for heating the conductive partition to a specific temperature is to control the heater and maintain the desired temperature.

The motivation for using the electrically conductive spiral shield of Long et al to connect the vacuum vessel and conductive partition of Nogami is to seal and electrically couple the vacuum vessel and conductive partition as taught by Long et al.

The motivation for replacing the rubber with CHEMRAZ E38, KALNEZ 8101, SAHARA, DRY seal or any other known high temperature sealing material in the spiral shield of Long et al is to enable the spiral shield to be use in high temperature conditions as taught by Loan et al.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a heater to the conductive partition of Nogami to heat the conductive plate to a desired temperature as taught by Kasai et al, use a conductive spiral shield and screws to electrically couple the conductive partition to the vacuum vessel of Nogami as taught by Long et al, and make the spiral shield out of a material that will withstand the temperatures to which it will be exposed as taught by Loan et al.

8. Claims 1 and 3-10 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S.

Patent No. 6,427,623 B2 (Ko), in view of Kasai et al, US Patent 6,436,193 B1, Long et al, US Patent Application Publication 2003/0079983 A1, and Loan et al, US Patent 6,296,711 B1. The obvious rejection of Ko in view of Kasai et al, Long et al, and Loan et al is discussed above.

9. Claims 1 and 3-10 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,892,669 B2 (Xu), in view Kasai et al, US Patent 6,436,193 B1, Long et al, US Patent Application Publication 2003/0079983 A1, and Loan et al, US Patent 6,296,711 B1. The obvious rejection of Xu in view of Kasai et al, Long et al, and Loan et al is discussed above.

10. Claims 1 are 3-10 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of copending Application No. 09/862,458 (Tanaka et al) in view of in view of Kasai et al, US Patent 6,436,193 B1, Long et al, US Patent Application Publication 2003/0079983 A1, and Loan et al, US Patent 6,296,711 B1. The obvious rejection of Tanaka et al in view of Kasai et al, Long et al, and Loan et al is discussed above.

This is a provisional obviousness-type double patenting rejection.

Response to Arguments

11. Applicant's arguments with respect to claims 1 and 3-10 have been considered but are moot in view of the new ground(s) of rejection.

12. In response to Applicant's argument that Kasai et al is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or,

if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Kasai et al is in the field of applicant i.e. CVD apparatus or more specifically, showerheads for a CVD apparatus, and concerned with the particular problem of supplying gas to the processing chamber in the optimum manner. Furthermore, Kasai et al teaches both a Thermal CVD apparatus and a Plasma CVD apparatus using the same showerhead (see figures specifically, figures1 and 7; and embodiments 1 and 3).

In regard to the argument that the generic teaching about heating the showerhead does not teach or suggest the claimed heater for the electrically conductive partitioning section, the Examiner disagrees. The partition section is part of the showerhead, and the claimed heater is generic. The only requirement in the claim is that there is a heater and it heats the partitioning section. The generic teaching of Kasai et al meets the generic heater claimed in claim 1.

In regard to the argument that the motivation for heating a showerhead in a thermal CVD system does not translate to a plasma CVD system, the examiner disagrees. Kasai et al teaches that it is important to keep the temperature of the source gas between its liquefying temperature and its reaction temperature to prevent the source gas from condensing or reacting in the showerhead. If a thermal CVD system, which operates at temperatures of 500°C +, requires a heater to keep the source gas from condensing, then the plasma CVD apparatus, which operates at temperatures of 200°C, will have the same need. Thus, the motivation does translate between the

thermal CVD and the plasma CVD. Furthermore, Kasai et al teaches both a Thermal CVD apparatus and a Plasma CVD apparatus using the same showerhead (see figures specifically, figures1 and 7; and embodiments 1 and 3).

The Examiner further notes that maintaining the source gas at the ideal temperature is motivation in itself for heating the showerhead.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited references teach high temperature seal made of various materials including silicon rubber.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrie R. Lund whose telephone number is (571) 272-1437. The examiner can normally be reached on Monday-Thursday (6:30 am-6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Jeffrie R. Lund
Primary Examiner
Art Unit 1763

JRL
10/2/05